

multi-spindled alternatives of Figs. 4 and 6. Clearly, Torras establishes that the number of spindles can vary and that **one spindle could be used instead of three spindles**. In fact, one of the Rotary Gang Teachings that will be discussed, the Risboro RTS Rotary Cutters, has rotary cutting deck assemblies arranged with three small blades carried on a spindle configuration like that shown in Fig. 6. When it becomes necessary to apply Risboro to a claim that requires a single spindle, like claim 1 in the 311 patent, it would certainly have been obvious to modify Risboro as taught expressly by Torras to change the Risboro triple spindle arrangement, (like that in Fig. 6 of Torras) to a single spindle configuration (like that in Fig. 5 of Torras).

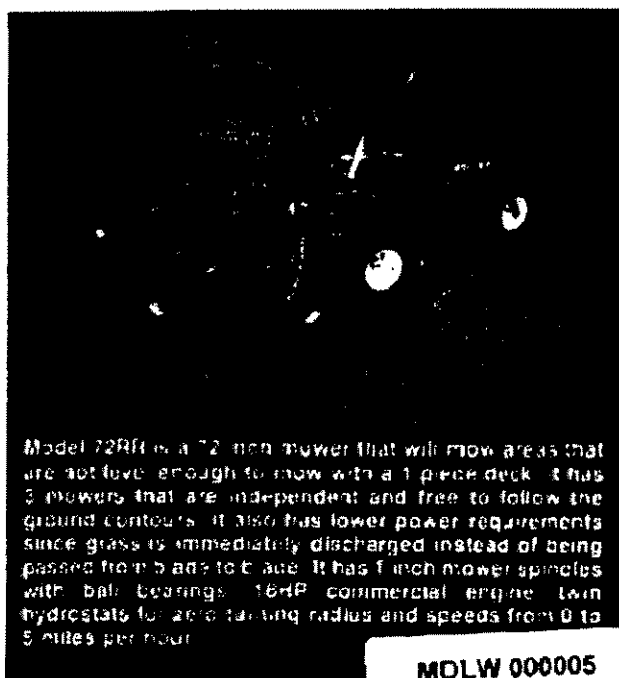
Detailed Explanation and Application of the Rotary Gang Teachings

That brings me full circle back to the references collectively referred to as the Rotary Gang Teachings. While I introduced them above, I have not yet reviewed them in detail. It is time to do that now and to begin applying them at last to the claims of the 311 patent.

- The Middlesworth 72RR

I will begin with the Middlesworth 72RR and claim 1 of the 311 patent. The Middlesworth 72RR anticipates claim 1 of the 311 patent under 35 USC 102(b).

The reader will recall that I had earlier reviewed a Middlesworth mower known as the 72R in conjunction with how a triplex is converted to a fiveplex. The 72R had flail mowers and not rotary mowers. However, the Middlesworth 72RR was a rotary gang mower version of the 72R. A photograph of the Middlesworth 72RR follows:



The Middlesworth 72RR had three independent rotary cutting deck assemblies, each of them single spindled. This photo shows the front two cutting deck assemblies ahead of the front wheels. This photo shows a small portion of the center rear deck assembly peeking out underneath the frame of the traction unit. Thus, the Middlesworth 72RR is a rotary gang mower in the claimed triplex configuration (where every rear deck assembly covers a gap between two adjacent front deck

assemblies) which uses a single spindle to mount a rotary cutting blade that rotates in a horizontal plane.

In addition to this brochure photo, one of the prior art references relating to Middlesworth is the "Operator's Manual and Parts List" that includes the parts drawings and the parts list for the rotary version, namely the 72RR in question. There is no difficulty in finding each and every limitation in claim 1 of the 311 patent in the Middlesworth 72RR in the Middlesworth "Operator's Manual and Parts List".

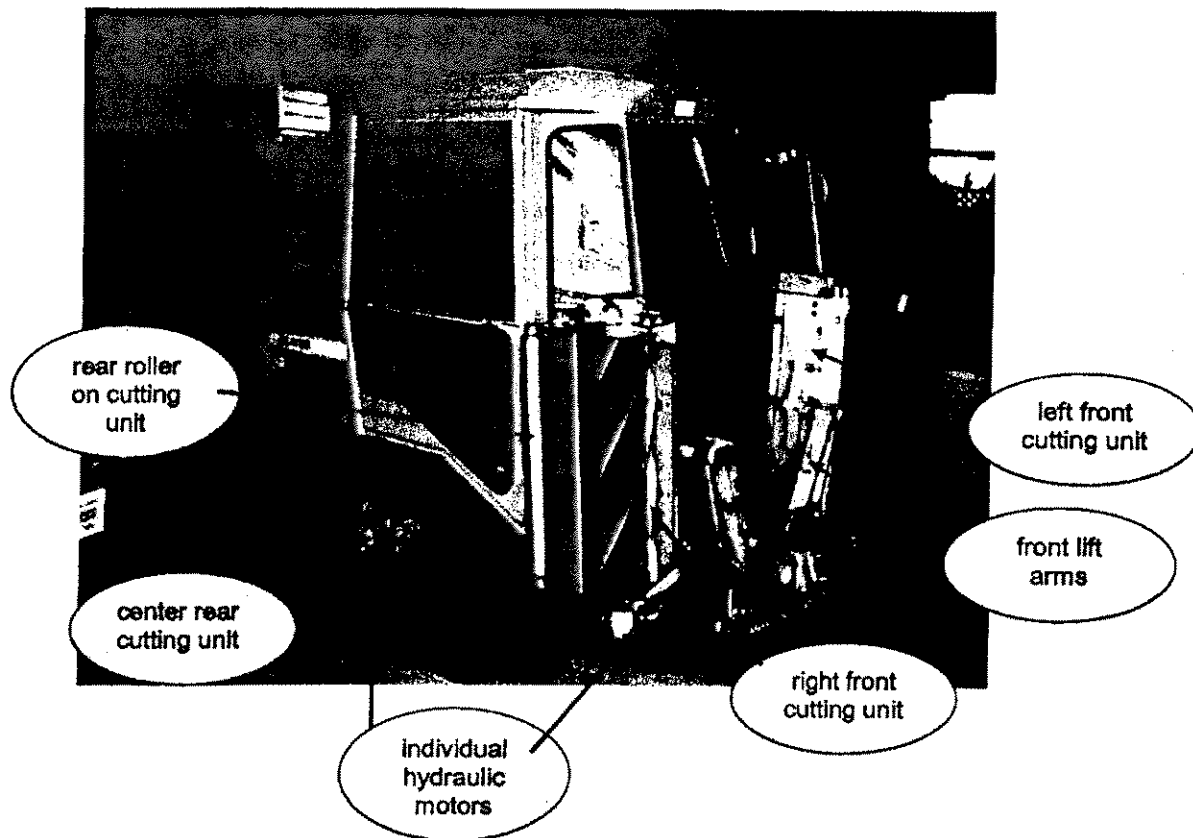
See the attached Middlesworth claim chart applying the Middlesworth 72RR as shown in the Operator's Manual and Parts List for the 72R to claim 1 of the 311 patent.

- **The Risboro RTS Rotary Cutters**

Let's move on to the Risboro RTS Rotary Cutters. I will apply Risboro to all the claims of the 311 patent, either under 35 USC 102 or 35 USC 103. First, I must spend a bit of time reviewing Risboro.

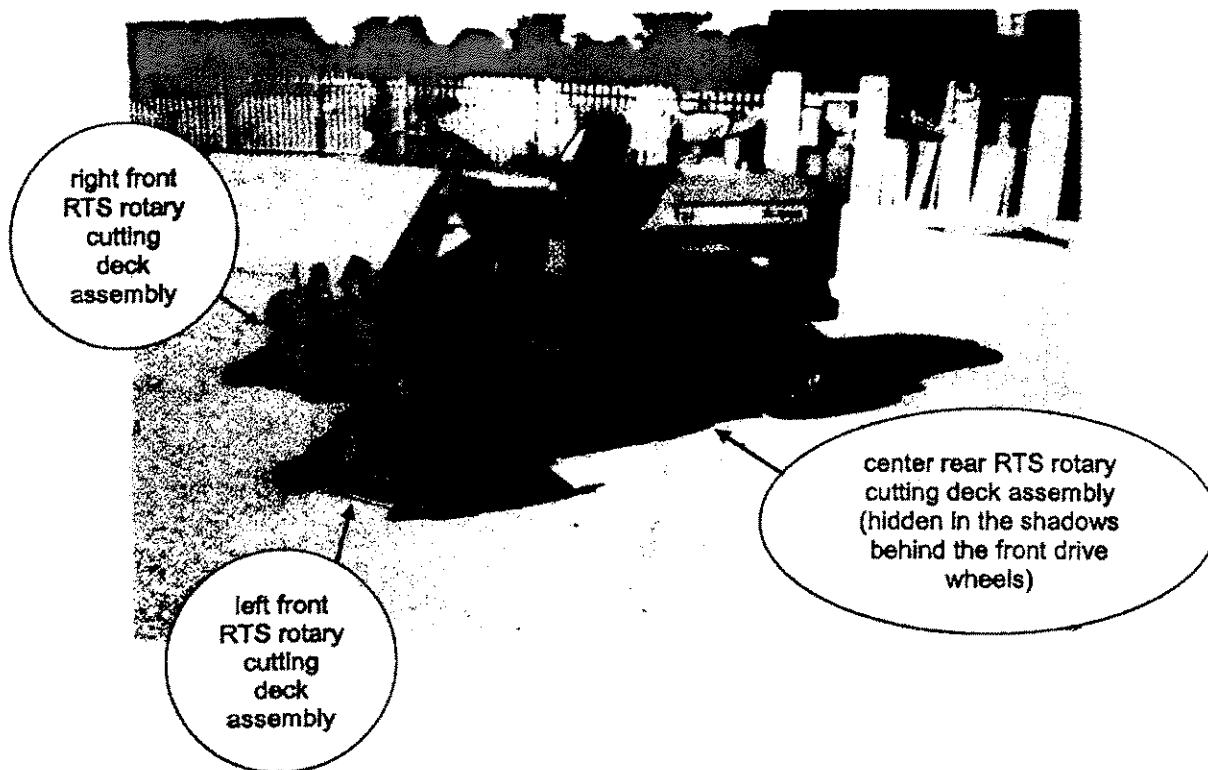
Risboro Turf was a company in the UK that in the mid 1990's made a rotary cutting deck assembly known as the RTS. These deck assemblies were designed to convert an existing triplex reel mower, the Beaver T24 and T224 models, from the use of reel cutting units, or cylinder cutting units as they are called in the UK, to rotary cutting deck assemblies. The Beaver T24 and T224 were later produced under the Hayter brand and these mowers then became known as the Hayter T24 and T224.

For background purposes only, I am going to reproduce a photo that I found on the internet of a Beaver T24 equipped with reel cutting units **prior to the conversion afforded by the Risboro RTS cutting deck assemblies.** Looking at the photo, one can see that the Beaver T24 was a reel mower much in the nature of Mitchell when Mitchell's cutting units are arranged in the third alternate gang configuration described in Mitchell. There were two outfront cutting units arranged ahead of the front drive wheels of the Beaver T24 and a single center rear cutting unit arranged between the front and rear drive wheels and covering the gap between the front units. As one can see, all three units are raised into the transport position in the photo, again as is common in triplex gang mowers utilizing a riding vehicle. The lift arms for the front cutting units are clearly visible and there would be a corresponding lift arm for the center cutting unit. Rather than use a mechanical PTO or belt and pulley drive to the cutting units, the Beaver T24 used individual hydraulic motors to drive the reels.



As I said before, the above photo of the Beaver T24 is for background purposes only, so that the PTO can better appreciate and understand what the Risboro RTS rotary cutting deck assemblies were all about. However, to repeat what I said earlier about Mitchell, the Beaver T24 is obviously another example that shows that most of the claim limitations in the claims of the 311 patent are simply well known, i.e. the claim limitations dealing with the type of traction unit (one having a frame supported by wheels with at least a pair of driven wheels, an engine, an operator's seat), the triplex arrangement of cutting units, the lift arms for raising the cutting units, the individual hydraulic motors for powering the cutting units, etc. A printed brochure dated August 1992 is also attached showing the Beaver T24.

There are two printed publications that describe and illustrate the Risboro RTS cutter deck assemblies. The first is a Risboro brochure entitled RTS Rotary Cutters. The following is a photograph taken from this brochure along with various portions of the text of the brochure. The photo shows the Beaver T24 base unit **with the Risboro RTS cutter deck assemblies attached thereto in replacement of the reel cutting units.** The entire brochure is, of course, attached hereto as part of the collection of prior art being submitted to the PTO with this Request.



The RTS Rotary cutters have been designed to fit the Beaver T24 and T224 models. They are a direct replacement for the 1030 and MK2 and MK2A cylinder cutter units. These units are a

assemblies are meant to replace reel cutting units, i.e. the "cylinder cutter units", of the existing triplex Beaver T24 shown earlier. The brochure goes on to further state why this is desirable in pointing to the more robust and less maintenance intensive nature of rotary cutters in the following language:

In looking at the text of the RTS Rotary Cutters brochure, as excerpted to the left, the brochure starts right out and tells one that these rotary deck

The design brief of these units was to provide an easy way of changing the type of cut on Beaver triple mowers from cylinder to rotary. The rotary-cutting head was to be of a simple robust design with minimum maintenance requirements.

Finally, the RTS Rotary Cutters brochure specifically mentions the presence of all three cutting units, both the front units and the center rear unit, in the following language. Note the specific reference to the "front 2 units" and to the "centre unit."

Remote greasing is provided to the rear of the front 2 units and to one side of the centre unit.

Now, the rears of the RTS rotary cutting deck assemblies are not clearly shown in the photos of the brochure. However, one must remember that the reel cutting units they replaced had a rear roller extending substantially across the width of each cutting unit. Go back to the Beaver T24 photo that clearly shows the roller on the raised right front cutting unit. In designing the RTS rotary cutting deck assemblies, Risboro kept the same rear roller support for the rotary cutting deck assemblies. This is mentioned in the brochure in the following passage:

pulley. Ht of cut adjustment is identical to the Beaver cylinder unit by 2 adjusters at the end of the rear roller.

It is believed that the RTS Rotary Cutters brochure does disclose to one skilled in the art the use on the rear of the rotary deck assemblies of the same type of rear roller as is used on the traditional reel mowers due to its explicit description that the height of cut adjustment **"is identical to the Beaver cylinder unit by 2 adjusters at the end of the rear roller"**. Typically, the rollers spanning across the rear of reel mowers had been adjusted in height using 2 threaded adjusters, one adjuster at either end of the rear roller. From the language of the brochure, one would realize that this roller structure had simply been carried over to the RTS cutting deck assemblies.

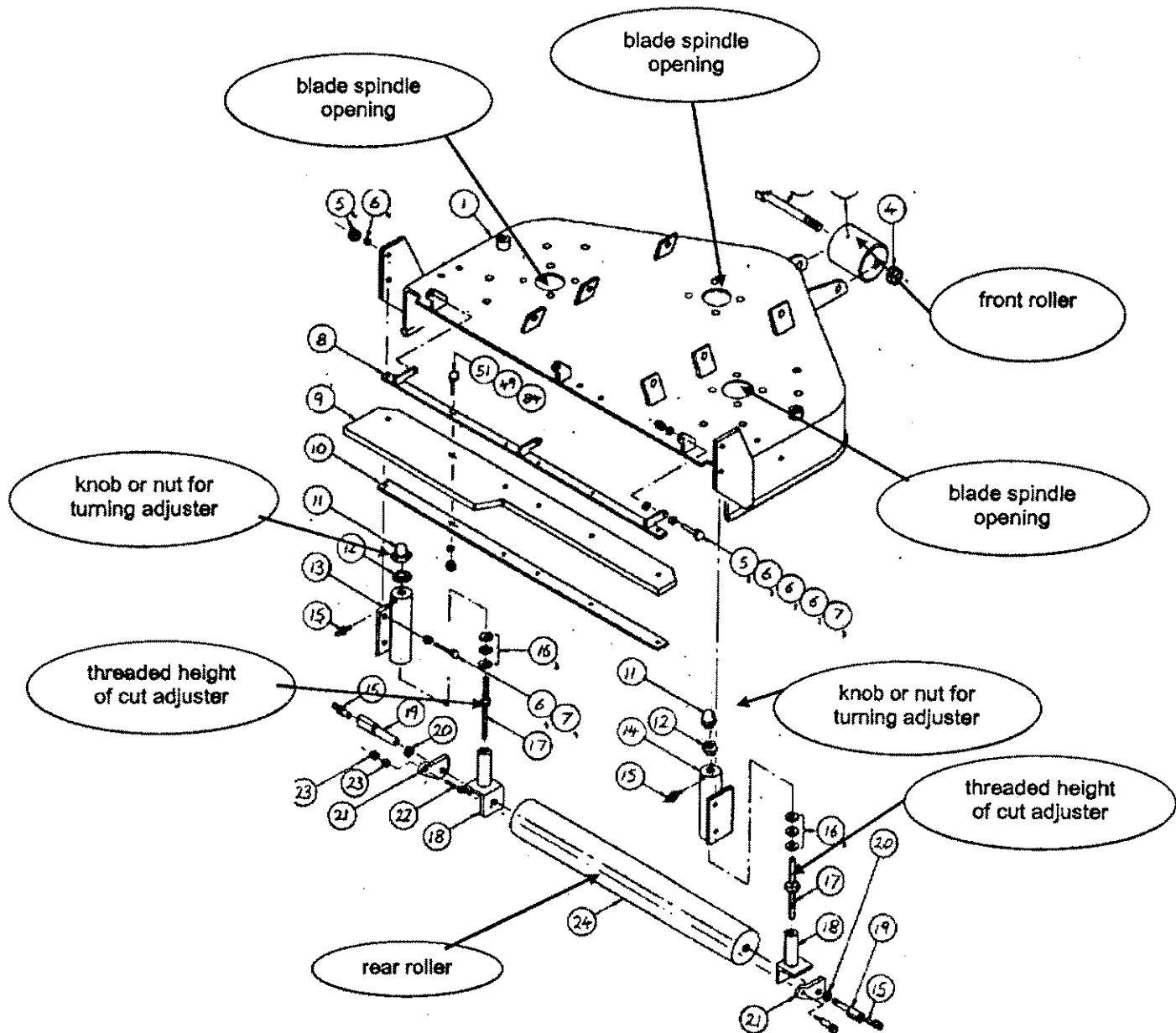
However, the RTS Rotary Cutters brochure is not the only publication distributed by Risboro Turf relating this product. Risboro Turf also put out a publication entitled "Rotary Cutterhead General Information" which instructed someone how to convert the Beaver T24 or T224 reel machines (now referred to in this publication as the Hayter T24 and T224 since the machines were now being produced under the Hayter brand name) to machines equipped with the RTS rotary deck assemblies. This publication also had parts drawings and lists for the RTS rotary deck assemblies as well as a general view of the traction unit.

In any event, the drawing showing one of the RTS cutter deck assemblies taken from this same publication follows. I have labeled portions of this drawing to help the reader identify parts. The RTS rotary cutting deck assemblies were not single spindled, but instead had three spindles driving three blades arranged in an offset and staggered configuration, i.e. one front center spindle carrying a blade and two trailing rear and laterally offset spindles both carrying additional blades. The drawing I am using does not show the spindles or blades, but it does show the openings in the deck assembly through which the spindles extend – and I have labeled these as blade spindle openings.

This drawing clearly shows that each RTS cutter deck assembly was supported by a wide rear roller. The drawing also shows the threaded height adjustment rods used to move the roller up and down relative to the deck assembly to change the height of cut. This is the height of cut adjustment

method and roller that was borrowed or adapted from the existing reel cutting units used on the Beaver/Hayter T24, as mentioned above.

The reader should now refer to the following drawing to better see and understand the structure I have just described.



The Risboro RTS rotary cutting deck assemblies fitted to the Beaver/Hayter T24, as described and shown in the Risboro publications, anticipates claims 2, 3, 5, 7, 8, 10 and 11 under 35 USC 102. In reading Risboro

on these claims, I have read these claims upon the disclosure of the single Risboro publication entitled "Rotary Cutterhead General Information", as such publication would be understood by those in the art. However, the claims could also be read on the Risboro RTS Rotary Cutter brochure as such publication would be understood by those in the art.

Risboro does not literally meet the terms of claim 1 of the 311 patent as it is a multi-spindled deck assembly and not a single spindled deck assembly. However, as I demonstrated above with respect to the Single Spindle Teachings, there are many references that show single spindled rotary deck assemblies. One of these, Torras, in fact shows in Fig. 6 (of Torras) the same type of offset and staggered triple spindle configuration used by the RTS deck assemblies, and **specifically then shows that a single spindled configuration as shown in Fig. 5 (of Torras) could be used instead of the triple spindle configuration.** It would have been obvious to one of ordinary skill in the art under 35 USC 103 to modify the RTS rotary cutting deck assemblies of Risboro to have just a single spindle. So modified, Risboro meets the terms of claim 1 of the 311 patent.

The two remaining claims in the 311 patent, namely claims 4 and 12, can similarly be met by another obvious modification to Risboro under the terms of 35 USC 103. In the RTS rotary cutting deck assemblies, the height of cut is adjusted by moving the ends of the roller up and down using threaded height of cut adjusters at the ends of the roller. However, as is apparent from the above illustration of the height of cut adjusters in the Risboro deck assembly, such adjusters have numerous parts such as the threaded shafts themselves, the vertical hubs or bores that carry the shafts, the adjusting knobs atop the shafts, etc. Thus, they are relatively expensive. In addition, over time, the adjusters may become difficult to turn and adjust as the rotary cutting deck assemblies become covered with dirt or grass clippings.

However, the Height of Cut Teachings all suggest a different, simpler and alternative structure and way to change the height of cut in a rotary cutting deck assembly. In these teachings, the ground engaging members of the cutting deck assembly are all carried on a pair of side plates. The cutting deck is then simply slid as an entire unit up and down relative to these side plates without individually adjusting the ground engaging members themselves. The cutting deck is secured in an adjusted position using simple, inexpensive fasteners, such as bolts, wing nuts and the like that pass through holes or slots. In the Ransomes Boom Mower, the side plates are supported by front and rear rollers, but Smith and Irgens have a pair of front wheels at the front ends of the side plates and a rear roller at the rear ends of the side plates. Smith is particularly relevant and almost identical to the height of cut adjustment structure of the 311 patent, down to the use of a U-shaped mount to carry the motor that drives the single spindle with the side walls of the U-shaped mount being positioned adjacent the side plates to slide up and down right next to the side plates.

In addition, the reader should remember that Smith's motivation was to provide a simpler height of cut adjustment structure that maintained a short rugged driving connection from the motor to the cutter. Again, Smith's exact words on this point were:

"the disclosure features a simplified means for varying the vertically adjusted position of the cutting blade to thus vary the distance above the ground at which the grass is severed while maintaining a short rugged driving connection with the motor or other prime mover".

In view of the Height of Cut Teachings showing an alternative height of cut adjustment structure that is recognized as being simpler and adapted for a rotary cutting deck driven by a motor that is directly mounted on the cutting deck assembly, and particularly in view of Smith, it would have been further obvious to one of ordinary skill in the art to do the same in the Risboro deck assemblies. It would have been further obvious under 35 USC 103 to have a pair of side plates in Risboro with the Risboro rear roller carried at the rear of the side plates, to use a pair of front wheels carried at the front of the side plates, and to then adjust the height of cut by sliding the whole deck assembly up and down relative to the side plates. This simply replaces the more complicated threaded height adjusters shown in Risboro with the simplified structure and system taught by Smith. As so modified, Risboro meets the terms of claims 4 and 12.

See the attached Risboro claim chart applying the Risboro RTS rotary cutting deck assemblies as shown in the "Rotary Cutterhead General Information" brochure to all the claims of the 311 patent.

- **The Nunes 355 Rotary Mower**

I will now turn my attention to the "Nunes Rotary Mower" brochure relating to the Model 355 rotary cutting deck assemblies. This is the only reference relied upon in this Request as raising a substantial new question of patentability that was of record in the prosecution of the 311 patent. However, this reference was never commented upon by the Examiner or the Applicant during the prosecution of the application and was never used as the basis for any rejection. Accordingly, since only very simple and obvious modifications are needed to apply Nunes to all the claims of the 311 patent under 35 USC 103, it is clear that Nunes raises substantial new questions of patentability, despite being of record.

Like Risboro, the Nunes 355 was a series of rotary cutting deck assemblies that were used to replace reel cutting units on a gang mower configuration. The Nunes deck assemblies were intended to replace reel cutting units on certain mowers sold by John Deere, namely the John Deere 3365. The John Deere 3365 was a fiveplex gang mower having two outfront cutting units in a front row and three trailing cutting units in a rear row. In this arrangement, the

outside cutting units in the rear row did not cover a gap formed by two adjacent front cutting units. The gap covering function was performed only by the middle rear cutting unit. The two outside rear cutting units were uncovered so to speak since there was no front cutting unit outboard of them.

The Nunes 355 rotary cutting deck assemblies were all hydraulically driven by a single drive motor on top of the deck. Looking at the attached deck assemblies, only the motor can be seen on top of each deck, the motor being the silver colored cylindrical object with the hydraulic hoses leading to it. There are no other belts, pulleys, or spindles on top of each deck – only the single silver colored hydraulic motor. Thus, it would be clear to anyone skilled in the art that the Nunes rotary cutting deck assemblies depicted in this brochure were single spindled deck assemblies.

Moreover, the Nunes rotary cutting deck assemblies were mounted to the traditional lift arms on the John Deere 3365 in place of the usual reel cutting units. When so mounted, each cutting unit was independent of the other cutting units and each cutting unit could independently follow the ground contours. As is typical in gang mowers, the lift arms could be lifted to raise the mowers into their transport positions. One of the photos in the brochure shows the two outside rear deck assemblies having been so lifted and folded up with the other three deck assemblies still being down on the ground prior to their being lifted.

The Nunes deck assemblies did not use a roller on the rear to support the deck assemblies. Instead, the deck assemblies were supported by four wheels at the corners thereof, a pair of front caster wheels and a pair of rear caster wheels. One of the modifications that must be made to apply Nunes to some of the claims of the 311 patent is to replace the rear caster wheels with a roller extending substantially across the width of the deck assembly. I will discuss this in more detail hereafter. Let's take a quick look first at one of the photos from the Nunes brochure, which I have labeled to show some of the components.

All HYDRAULICALLY DRIVEN!

JD 3365 traction unit, i.e. frame, front and rear wheels, engine, seat, steering wheel, lift arms, etc.

right front cutting deck assembly

single hydraulic motor on each deck with hydraulic hoses connected thereto

left front cutting deck assembly

front caster wheels

left outside rear cutting deck assembly

rear caster wheels

<ul style="list-style-type: none"> ■ 5 Deck All Hydraulically Driven ■ High Quality Finish Cut ■ High Productivity ■ 7.25 Acres an Hour at 5 M.P.H. ■ Low Maintenance ■ No Belts or Pulleys to Adjust or Maintain ■ Easily Attached and Detached 	<ul style="list-style-type: none"> ■ Raise Units for Transportation, Storage and Maintenance ■ Blades Shut Off Automatically When Raised ■ Height of Cut $\frac{3}{4}$" to $4\frac{1}{4}$" ■ Cutting Width 140" ■ Transportation Width 96" ■ Nunes Model 355
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The text of the Nunes brochure, set forth above, confirms the presence of a fiveplex gang mower in which the illustrated mowers are hydraulic motors. This is confirmed by the very first bullet item, namely the bullet describing a "5 Deck All Hydraulically Driven". The rotary nature of the deck assemblies is established in three ways, first by the title of the brochure which is "Nunes Rotary Mower", secondly, by the pictures of the deck assemblies which show flat rotary decks of the type that are obviously meant to enclose a flat rotary cutting blade, and thirdly, by the bullet item in the second column that reads "Blades Shut Off Automatically When Raised." The fact that the rotary deck assemblies are mounted on lift arms to allow them to be raised is also evidenced by the fact that the other photo in the Nunes brochure shows the rear outside

deck assemblies already having been raised along with the bullet item at the top of the second column that reads **"Raise Units for Transportation, Storage and Maintenance."** The fact that the deck assemblies are single spindled is clearly shown by the fact that a single hydraulic motor is shown on top of the deck without any other spindles, belts or pulleys, as discussed earlier.

The rotary gang mower shown in the "Nunes Rotary Mower" brochure could be applied to claim 1 of the 311 patent under 35 USC 102 except for one thing – namely the precise gang arrangement shown in Nunes and the fact that it does not meet the Court's claim construction regarding claim 1 (the two outside rear rotary cutting deck assemblies do not cover a gap between two front cutting deck assemblies). However, if the Nunes 355 were converted to a triplex configuration by simply deleting the two outside rear cutting deck assemblies and their supporting mechanism, leaving only the two front cutting deck assemblies and the center rear cutting deck assembly, then Nunes would apply to claim 1 of the 311 patent even keeping the Court's construction of that claim in mind. Middlesworth teaches this precise modification for changing back and forth between a triplex and a fiveplex by adding or subtracting two rear outside cutting deck assemblies. Alternatively, Mitchell clearly teaches rearranging units from one gang configuration to another by reversing the front and back rows. It would have been obvious under 35 USC 103 to one of ordinary skill in the art that the Nunes fiveplex could have been converted to a triplex as specifically taught by Middlesworth or that the front and back rows in Nunes could be reversed as taught by Mitchell. Moreover, the plaintiff in the pending patent litigation even applies claim 1 of the 311 patent to a Toro product that has the two front / three rear gang configuration shown in the "Nunes Rotary Mower" brochure.

The remaining claims of the 311 patent do not require the same specific gang configuration set forth in claim 1 of the 311 patent. However, they do require the use of a rear roller spanning substantially across the width of the cutting deck (claim 2) or the width of the cutting path (claim 10). As demonstrated above when discussing the cutting deck assembly of the 311 patent, a rear roller was used precisely for the purpose of resisting scalping and to stripe the grass, as explicitly set forth in the specification of the 311 patent.

As I showed above in discussing the Rear Roller Teachings, the use of a rear roller spanning across the cutting deck to provide the deck assembly with better ground following in order to resist scalping and/or to provide the deck assembly with the ability to stripe the grass was **unquestionably** widely and well known in the mower art. The knowledge that this is what a rear roller is meant to do was simply part of the background fabric of the art. **If anything can ever be said to be obvious under 35 USC 103 to one of ordinary skill in this art, or any other art for that matter, it would be the substitution of a rear roller of the type claimed in claims 2 and 10 for the pair of rear caster wheels in Nunes.** Nothing can be more obvious. Nothing can be clearer than this.

Not to belabor a point, but imagine a person of ordinary skill in the art given the task of taking the Nunes 355 Rotary Mower and providing it with the additional benefits of avoiding scalping and of striping the grass. Give this same designer the Rear Roller Teachings which specifically tell him or her that a rear roller extending substantially across the width of the deck provides these benefits. The Freier patent and Honda brochure even show such a rear roller specifically as a substitute for wheel support at the rear corners of the deck assembly. **In fact, the art even had roller attachments which were sold precisely for the purpose of replacing the rear caster wheels with a wide rear roller, as taught by the Kilworth Sovema optional rear roller attachment.**

Given these teachings, how could it not be obvious to the designer to simply take off the Nunes caster wheels and replace them with a rear roller? That is precisely the simple substitution that the person of ordinary skill in the mower art would have found obvious. With this change to the Nunes deck assemblies, Nunes can be read on claims 2, 3, 5, 7, 8, 10 and 11 of the 311 patent under 35 USC 103.

Having made this change, it would further have been obvious to the designer that the alternative height of cut system shown in the Height of Cut Teachings could be adapted to the rear roller carrying deck assemblies of Nunes. In other words, once a rear roller is in place on the Nunes deck assemblies, Smith, Irgens and the Ransomes Boom Mower all show an alternative and simple way to adjust the height of cut – namely to support the ground engaging wheels and rollers between a pair of side plates and simply slide the whole deck up and down relative to the side plates. It would have been further obvious under 35 USC 103 to one of ordinary skill in the art to do the same with the redesigned Nunes, namely to place the front wheels and rear roller on a pair of side plates and to slide the cutting deck up and down on the side plates. With this additional change to the Nunes deck assemblies, Nunes can be read under 35 USC 103 on the remaining claims 4 and 12 of the 311 patent.

See the attached Nunes claim chart applying the Nunes rotary cutting deck assemblies as shown in the Nunes Rotary Mower brochure to all the claims of the 311 patent.

Lesco is the next Rotary Gang Teaching that we need to discuss. This mower is shown mounted on a Lesco 500D traction unit in a photograph printed in the Sebring News, January 27, 1988. The photo shows two men looking at the mower. I will reproduce the photograph below.

This photo shows a fiveplex rotary gang mower. The left front deck assembly and the left outside rear deck assembly are tipped up on edge and are not lying flat on the ground. The people in this photo appear to be looking at the underside of these two tipped up deck assemblies. The traction unit shown in

the photo is a Lesco 500D product, the D standing for diesel powered. The accompanying caption to this photo identified this product as a diesel-powered golf course mower.



It is clear that the deck assemblies in this photo are rotary cutting deck assemblies – not reel mowers of the type that were normally present on the Lesco 500. A Lesco brochure showing a reel equipped Lesco 500 is included in this request so that the PTO can compare the deck assemblies shown in this photograph to the reel mowers – the two look completely different. The flat tops of these deck assemblies are evidence that these are rotary deck assemblies and the use of a single motor and the relative small size of the deck assemblies indicate that they are single spindled. Thus, the Lesco 500 rotary gang mower shown in the photo above is much like Nunes. It can be applied to claim 1 of the

311 patent in the same way as Nunes in that this fiveplex configuration could obviously have been modified to a triplex by dropping the two outside rear cutting deck assemblies and using only the two front cutting deck assemblies and the center rear deck assembly in a traditional triplex configuration.

It would still have been obvious under 35 USC 103 to modify the Lesco 500D in the same way established earlier with respect to the Nunes rotary cutting deck assemblies. Nunes and Lesco are really much the same – fiveplex gang mowers having single spindled, hydraulically powered, rotary cutting deck assemblies arranged in a gang configuration having two outfront deck assemblies and three trailing rear deck assemblies. Attached hereto are excerpts from the deposition testimony of Mr. Fred Eberlein, a Lesco employee at the time the Lesco 500D Rotary Mower had been built and was shown, that establishes that the Lesco 500 D Rotary Mower, as depicted in the photograph, indeed had these features.

Accordingly, a whole set of 103 rejections could also be based on Lesco in precisely the same way that a whole set of 103 rejections could be based on Nunes, i.e. obvious to convert Lesco to a triplex as it was obvious to convert Nunes to a triplex, obvious to use a rear roller on Lesco's deck assemblies as it was obvious to use a rear roller on the Nunes deck assemblies, and obvious to use the height of cut adjustment method from the Height of Cut Teachings on the modified Lesco deck assemblies as it was obvious to do so on the modified Nunes deck assemblies.

See the attached Lesco claim chart applying the Lesco 500D Rotary Gang as shown in the Sebring Times photograph to all the claims of the 311 patent.

Alternative Ways to Combine the Prior Art

- **Ransomes Boom Mower**

The Ransomes Boom Mower was a single spindled, rotary cutting deck assembly that was specifically designed with good ground following characteristics to permit its use in mowing the sides of ditches and the like. The cutting deck was supported by front and rear rollers carried between a pair of side plates. The cutting deck height of cut was adjusted by moving the cutting deck as a unit up and down between the side plates of the roller frame. The Boom Mower was supported on the end of a boom and could pivot on the boom to allow good ground following to take place. The boom comprised a lift arm to allow the Boom Mower to be lifted and lowered relative to the traction unit.

In terms of any of the individual rotary gang cutting units shown in the 311 patent, the Boom Mower was much the same as any individual cutting deck assembly in the 311 patent. The Boom Mower was of a similar size and had to follow ground contours just like what is necessary for the cutting deck assemblies

in most gang mowers, whether reel or rotary. The only major differences are that the Ransomes Boom Mower showed one Boom Mower on the end of one lift arm and the Boom Mower was mechanically and not hydraulically driven.

Remember that the Rotary Gang Teachings clearly teach using rotary cutting deck assemblies of a size that is similar to or practically identical to the Ransomes Boom Mower in a gang triplex or fiveplex configuration on a vehicle. This allows one to mow wider swaths of grass than can be mowed by one deck assembly alone. The Ransomes Boom Mower was 25 inches wide and the Middlesworth 72RR was designed to mow a 72 inch swath. This is precisely the same width swath that would be cut with three ganged Ransomes Boom Mowers if each end of the rear center cutting unit is overlapped by 1.5 inches with the adjacent end of the pair of front cutting units. Sizewise, the Ransomes Boom Mower is a good fit to simply drop into the gang arrangements shown in any of the Rotary Gang Teachings. Moreover, many of the Rotary Gang Teachings show the use of individual hydraulic motors to power such mowers.

Because of the size similarity along with the exact same need to follow ground contours, it would have been obvious under 35 USC 103 to one of ordinary skill in the art to duplicate the Ransomes Boom Mowers and to use them on the lift arms of any of the Rotary Gang Teachings, such as on the lift arms present on the traction units for the Middlesworth 72RR, the lift arms on the Beaver/Hayter T24 that mount the Risboro RTS Rotary Cutters, the lift arms on the John Deere 3365 that mount the Nunes Rotary Mowers, or the lift arms on the Lesco 500D that mount the Lesco 500D rotary cutting deck assemblies. When this is done, when a plurality of the Ransomes Boom Mowers are simply mounted on these other mowers and used now as individual cutting deck assemblies in a gang arrangement of a plurality of such cutting deck assemblies rather than as a single solitary cutting deck assembly, the Ransomes Boom Mowers so arranged will read on claims 1, 2, 3, 7, 8, 10 and 11 of the 311 patent.

The remaining claims of the 311 patent would further similarly be obvious under 35 USC 103 to one of ordinary skill in the art. When making this combination as set forth above, it would be obvious to power the duplicated Ransomes Boom Mowers with the individual hydraulic motors taught in Risboro, Nunes or Lesco rather than powering the Boom Mowers mechanically. This would read on claim 5. The Ransomes Boom Mower already uses the height of cut adjustment method set forth in claims 4 and 12 except for the use of a front roller rather than a pair of front wheels. It would further have been obvious under 35 USC 103 to one of ordinary skill in the art that the front roller of the Ransomes Boom Mower could have been replaced with a pair of front wheels as specifically taught by the roller frames of either Smith or Irgens.

A separate claim chart has not been appended to apply the Ransomes Boom Mower to the claims at issue in this Reexamination Request. It is believed that the text above along with the master Claim Chart set forth earlier in the

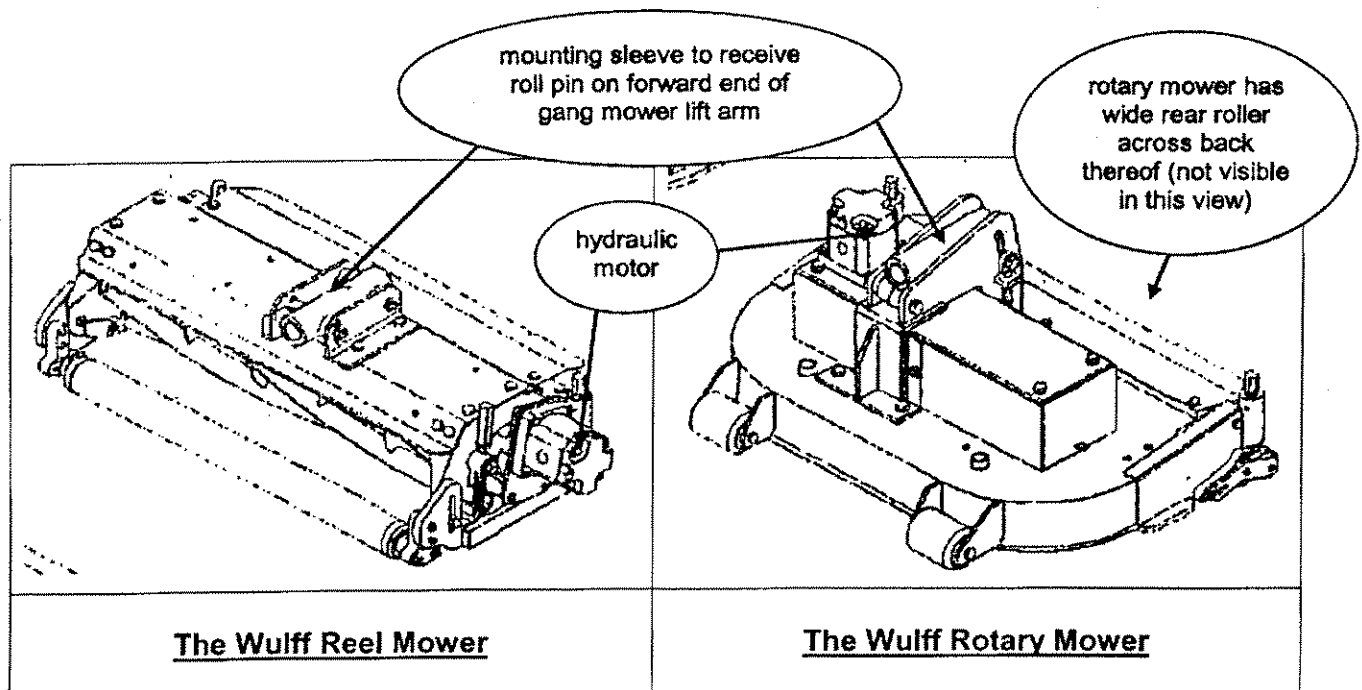
section of this Request entitled **Statement Pointing Out Each Substantial New Question of Patentability** is sufficient.

• **The Wulff Rotary Mower**

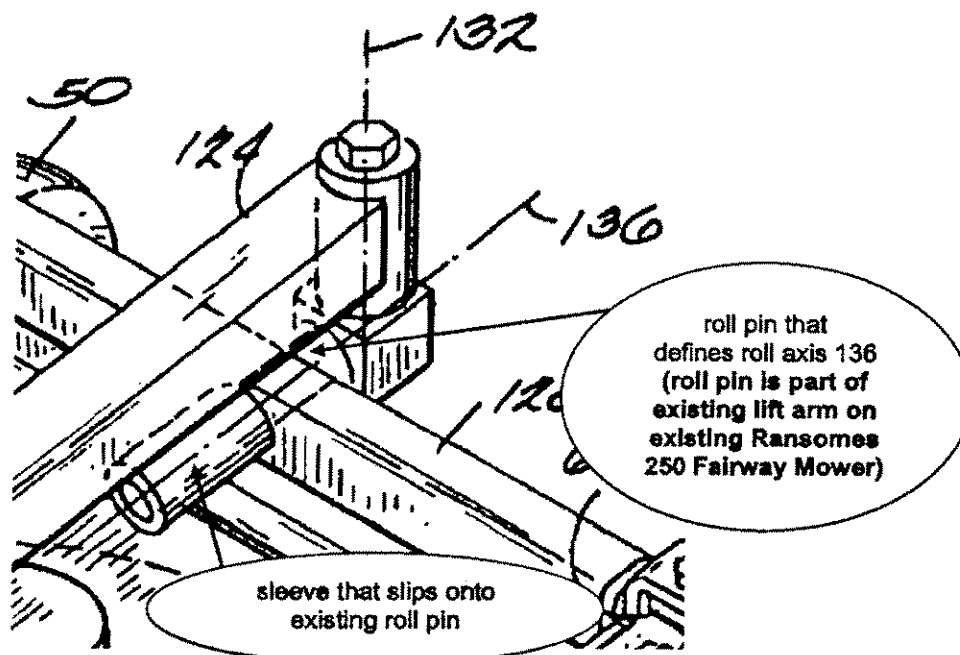
Wulff is a company in Europe that manufactures and sells various cutting units, both reel cutting units and rotary cutting deck assemblies, that are intended to be used on the lift arms of gang mowers, such as on the lift arms of a gang mower like the Ransomes 250 Fairway Mower. The customer has a choice – mount either a reel cutting unit or a rotary cutting deck assembly.

The Wulff publication relied upon herein shows both types of cutting units, namely both a reel cutting unit as well as a rotary cutting deck assembly. I have reproduced below both the reel cutting unit as well as the rotary cutting deck assembly, both of which are shown on the front page of this publication, and have added various labels thereto. The Wulff publication is a 102(b) printed publication against the claims of the 312 patent.

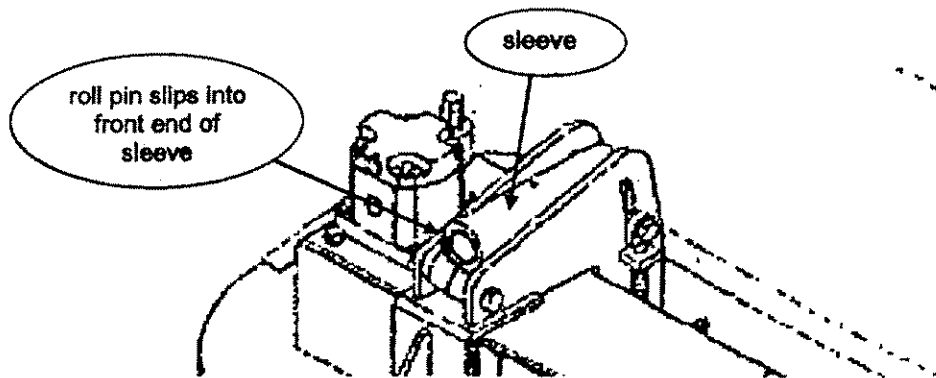
One can easily see that both mowers have the same fore and aft extending mounting sleeve that receives a cylindrical roll pin on the forward end of a gang mower lift arm to mount the mower on the lift arm for rolling about a fore and aft extending roll axis. One can also easily see that each mower is powered by its own individual hydraulic motor. The Wulff Rotary Mower is a multi-spindled cutting deck assembly having a pair of spindles. The Wulff Rotary Mower has a wide rear roller across the back thereof. **The rear roller is shown on page 3 of the Wulff publication (pg. Toro 073117).**



One must remember that the Ransomes 250 Fairway Mower had lift arms with roll pins at the front end that were simply inserted into a sleeve in a reel cutting unit to mount the reel cutting units. When Ransomes took its 250 Fairway Mower and converted it to use the rotary cutting decks of the invention disclosed in the 311 patent, it simply used the existing lift arms with their existing roll pins. Then, Ransomes simply provided each rotary cutting deck assembly with a sleeve adapted to receive and support the roll pin so that the rotary cutting deck assembly could be slipped onto the same roll pin that had previously mounted a reel cutting unit in place of the existing reel cutting unit. A portion of Fig. 2 of the 311 patent is reproduced below to show the roll pin and sleeve structure as follows:



The Wulff Rotary Mower, as we have seen, had just such a sleeve to allow it to be slipped onto just such a roll pin on the lift arm of a gang mower. Here's the showing of the sleeve again from the Wulff Rotary Mower:



It would have been obvious under 35 USC 103 to one of ordinary skill in the art to simply mount five Wulff Rotary Mowers onto the roll pins on the existing five lift arms of the Ransomes 250 Fairway Mower or any one of a number of other similar gang mowers in place of the existing reel cutting units as the Wulff Rotary Mower was built and sold for the purpose of converting reel gang mowers to rotary gang mowers and vice versa. When so mounted, the resulting gang mower based on the use of the Wulff Rotary Mowers reads on claims 2, 3, 5, 7, 8, 10 and 11.

In addition, it would have been further obvious under 35 USC 103 to modify the Wulff Rotary Mowers to use the height of cut system taught by the Height of Cut Teachings discussed previously in this Request. So modified, Wulff also reads on claims 4 and 12. Finally, it would have been further obvious under 35 USC 103 to modify the Wulff Rotary Mowers to change from a dual spindle/blade configuration to a single spindle/blade configuration as taught by any of the Single Spindle Teachings. So modified, Wulff reads on claim 1.

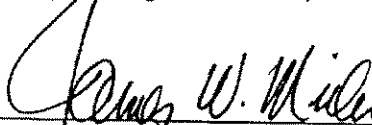
See the attached Wulff claim chart applying the Wulff Rotary Mower when mounted on the Ransomes 250 Fairway Mower to all the claims of the 311 patent.

Summary

Clearly, the prior art relied upon in this Request raises substantial new questions of patentability regarding the 311 patent. All the requirements for inter partes reexamination have been met. The PTO should order such reexamination and find that at least claims 1-5, 7, 8 and 10-12 of the 311 patent are unpatentable.

March 23, 2007

Respectfully submitted,



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311 Patent Claims	Lesco 500D Rotary Gang Mower (The Sebring News Photograph)
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.</p>	<p>the frame of the Lesco 500D traction unit as pictured;</p> <p>the engine that must be is part of the Lesco 500D traction unit to allow it to operate;</p> <p>the seat of the Lesco 500D traction unit as pictured;</p> <p>the steering wheel of the Lesco 500D traction unit as pictured;</p> <p>the pair of front cutting deck assemblies as pictured;</p> <p>Obvious under 35 USC 103 to convert Lesco to a triplex by deleting the two outside rear cutting deck assemblies as taught by the different configurations of the Middlesworth 72R, and when so modified this claim limitation is met by the remaining center rear rotary cutting deck assembly;</p> <p>the Lesco cutting deck assemblies are single-spindled as evidenced by the single hydraulic motors shown on each deck and the deck assemblies are rotary deck assemblies as evidenced by their configuration shown in the photos.</p>

<p>2. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels,</p> <p>an operator's seat mounted on said frame,</p> <p>a steering system enabling the operator to steer said lawn mower,</p> <p>at least one front rotary cutting deck assembly mounted on said frame in front of said front wheels;</p> <p>at least one rear rotary cutting deck assembly mounted on said frame behind said front deck assemblies and between said front and rear wheels; and</p> <p>each of said front and rear deck assemblies including a deck defining a downwardly opening space, at least one cutting blade mounted on a spindle for rotation therewith and at least one roller supporting said deck for movement over the ground, said roller extending substantially across the entire width of said deck.</p>	<p>the frame of the Lesco 500D traction unit as pictured;</p> <p>the engine that must be is part of the Lesco 500D traction unit to allow it to operate;</p> <p>the seat of the Lesco 500D traction unit as pictured;</p> <p>the steering wheel of the Lesco 500D traction unit as pictured;</p> <p>the pair of front cutting deck assemblies as pictured;</p> <p>any of the rear cutting deck assemblies as pictured;</p> <p>Obvious under 35 USC 103 to use a rear roller extending substantially across the entire width of said deck to provide better ground following and/or striping as taught by any of the Rear Roller Teachings.</p>
<p>3. A lawn mower as set forth in claim 2 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>The lift arms that must be present on the Lesco 500D traction unit. Some of these lift arms are visible in the photograph.</p>

<p>4. A lawn mower as set forth in claim 2 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>With respect to the combination of claim 2, further obvious under 35 USC 103 to support the ground engaging wheels and rear roller between side plates and to adjust the height of cut by moving the cutting deck up and down relative to the side plates, as further taught by any of the Height of Cut Teachings.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the individual hydraulic motors as pictured;</p>
<p>7. A lawn mower as set forth in claim 2 wherein at least two front rotary cutting deck assemblies are mounted on said frame in a side-by-side relationship defining a gap between adjacent front deck assemblies.</p>	<p>both of the front rotary cutting deck assemblies as pictured;</p>
<p>8. A lawn mower as set forth in claim 7 wherein at least one rear deck assembly is aligned with said gap.</p>	<p>the center rear rotary cutting deck assembly;</p>

<p>10. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground;</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels;</p> <p>an operator's seat mounted on said frame;</p> <p>a steering system enabling the operator to steer said lawn mower;</p> <p>at least two front rotary cutting deck assemblies mounted to said frame in front of said front wheels and in a side-by-side relationship, wherein each of said front cutting deck assemblies defines a front cutting path; and</p> <p>at least one rear rotary cutting deck assembly being mounted on said frame behind said front deck assemblies, said rear rotary cutting deck assembly defining a rear cutting path extending laterally to overlap a portion of each of said front cutting paths,</p> <p>wherein each of said front and rear deck assemblies has at least one cutting blade mounted on a spindle for rotation therewith and at least one roller to support each of said deck assemblies for movement over the ground, said roller extending substantially across the entire width of said cutting path.</p>	<p>the frame of the Lesco 500D traction unit as pictured;</p> <p>the engine that must be is part of the Lesco 500D traction unit to allow it to operate;</p> <p>the seat of the Lesco 500D traction unit as pictured;</p> <p>the steering wheel of the Lesco 500D traction unit as pictured;</p> <p>the pair of front rotary cutting deck assemblies as pictured;</p> <p>the center rear rotary cutting deck assembly;</p> <p>Obvious under 35 USC 103 to use a rear roller extending substantially across the entire width of said cutting path to provide better ground following and/or striping as taught by any of the Rear Roller Teachings.</p>
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<p>11. A lawn mower as set forth in claim 10 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>The lift arms that must be present on the Lesco 500D traction unit. Some of these lift arms are visible in the photograph.</p>
<p>12. A lawn mower as set forth in claim 10 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>With respect to the combination of claim 10, further obvious under 35 USC 103 to support the ground engaging wheels and rear roller between side plates and to adjust the height of cut by moving the cutting deck up and down relative to the side plates, as further taught by any of the Height of Cut Teachings.</p>

<u>311 Patent Claims</u>	<u>Middlesworth 72RR</u> (Middlesworth Operator's Manual and Parts List, MDLW 24 - MDLW 50)
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.</p>	<p>In MDLW 41, the frame II supported by two front wheels MN (only one of which is shown) and rear wheel YZ;</p> <p>In MDLW 43, the engine AA driving right hand hydro transmission RS and left hand hydro transmission ST;</p> <p>In MDLW 41, the seat BC;</p> <p>In MDLW 41, the steering control handles UV (only one of which is shown);</p> <p>In MDLW 46, the left mower housing M and right mower housing N;</p> <p>In MDLW 46, the rear mower housing O;</p> <p>In MDLW 46, the single front spindles JJ mounting the cutting blades SS for the front mower housings M and N (only the single front spindle JJ and cutting blade SS for left mower housing N is shown) and the single front spindle KK mounting the cutting blade QQ for the rear cutting deck O.</p>

<u>311 Patent Claims</u>	<u>Mitchell</u>
<p>10. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground;</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels;</p> <p>an operator's seat mounted on said frame;</p> <p>a steering system enabling the operator to steer said lawn mower;</p> <p>at least two front rotary cutting deck assemblies mounted to said frame in front of said front wheels and in a side-by-side relationship, wherein each of said front cutting deck assemblies defines a front cutting path; and</p> <p>at least one rear rotary cutting deck assembly being mounted on said frame behind said front deck assemblies, said rear rotary cutting deck assembly defining a rear cutting path extending laterally to overlap a portion of each of said front cutting paths,</p> <p>wherein each of said front and rear deck assemblies has at least one cutting blade mounted on a spindle for rotation therewith and at least one roller to support each of said deck assemblies for movement over the ground, said roller extending substantially across the entire width of said cutting path.</p>	<p>Mitchell's frame as labeled in the Mitchell drawing in the Request, the pair of front wheels 22 and the pair of rear wheels 28.</p> <p>Mitchell's engine 18 driving the pair of front wheels 22.</p> <p>Mitchell's seat as labeled in the drawing from Mitchell in the Request.</p> <p>Mitchell's steering system as labeled in the Mitchell drawing in the Request.</p> <p>Mitchell's spaced front cutting units 36 as arranged in the third alternate gang configuration described in Mitchell and as diagrammed in the Request.</p> <p>Mitchell's single rear cutting unit 34 as arranged in the third alternate gang configuration described in Mitchell and as diagrammed in the Request.</p> <p><i>This is what Mitchell doesn't have. Mitchell discloses reel cutting units and not rotary cutting units of the type claimed herein.</i></p>

11. A lawn mower as set forth in claim 10 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.

Mitchell discloses that each cutting unit is coupled to the frame by its own separate lift arm 52 or 56.

<u>311 Patent Claims</u>	<u>Nunes 355 Rotary Mower (Nunes Model 355 brochure)</u>
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.</p>	<p>the frame of the John Deere 3365 traction unit as pictured;</p> <p>the engine that must be is part of the John Deere 3365 traction unit to allow it to operate;</p> <p>the white seat of the John Deere 3365 traction unit as pictured;</p> <p>the steering wheel of the John Deere 3365 traction unit as pictured;</p> <p>the pair of front cutting deck assemblies as pictured;</p> <p>Obvious under 35 USC 103 to convert Nunes to a triplex by deleting the two outside rear cutting deck assemblies as taught by the different configurations of the Middlesworth 72R, and when so modified this claim limitation is met by the remaining center rear rotary cutting deck assembly;</p> <p>the Nunes cutting deck assemblies are single-spindled as evidenced by the single hydraulic motors shown thereon and the deck assemblies are rotary as evidenced by their configuration shown in the photos along with the reference to blades.</p>

<p>2. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels,</p> <p>an operator's seat mounted on said frame,</p> <p>a steering system enabling the operator to steer said lawn mower,</p> <p>at least one front rotary cutting deck assembly mounted on said frame in front of said front wheels;</p> <p>at least one rear rotary cutting deck assembly mounted on said frame behind said front deck assemblies and between said front and rear wheels; and</p> <p>each of said front and rear deck assemblies including a deck defining a downwardly opening space, at least one cutting blade mounted on a spindle for rotation therewith and at least one roller supporting said deck for movement over the ground, said roller extending substantially across the entire width of said deck.</p>	<p>the frame of the John Deere 3365 traction unit as pictured;</p> <p>the engine that must be is part of the John Deere 3365 traction unit to allow it to operate;</p> <p>the white seat of the John Deere 3365 traction unit as pictured;</p> <p>the steering wheel of the John Deere 3365 traction unit as pictured;</p> <p>the pair of front cutting deck assemblies as pictured;</p> <p>any of the rear cutting deck assemblies as pictured;</p> <p>Obvious under 35 USC 103 to replace the two rear caster wheels with a rear roller extending substantially across the entire width of said deck to provide better ground following and/or striping as taught by any of the Rear Roller Teachings.</p>
<p>3. A lawn mower as set forth in claim 2 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>The lift arms that must be present on the John Deere 3365 traction unit in order to "raise units for transportation, storage and maintenance".</p>

<p>4. A lawn mower as set forth in claim 2 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>With respect to the combination of claim 2, further obvious under 35 USC 103 to support the ground engaging wheels and rear roller between side plates and to adjust the height of cut by moving the cutting deck up and down relative to the side plates, as further taught by any of the Height of Cut Teachings.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the individual hydraulic motors as pictured;</p>
<p>7. A lawn mower as set forth in claim 2 wherein at least two front rotary cutting deck assemblies are mounted on said frame in a side-by-side relationship defining a gap between adjacent front deck assemblies.</p>	<p>both of the front rotary cutting deck assemblies as pictured;</p>
<p>8. A lawn mower as set forth in claim 7 wherein at least one rear deck assembly is aligned with said gap.</p>	<p>the center rear rotary cutting deck assembly;</p>

<p>10. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground;</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels;</p> <p>an operator's seat mounted on said frame;</p> <p>a steering system enabling the operator to steer said lawn mower;</p> <p>at least two front rotary cutting deck assemblies mounted to said frame in front of said front wheels and in a side-by-side relationship, wherein each of said front cutting deck assemblies defines a front cutting path; and</p> <p>at least one rear rotary cutting deck assembly being mounted on said frame behind said front deck assemblies, said rear rotary cutting deck assembly defining a rear cutting path extending laterally to overlap a portion of each of said front cutting paths,</p> <p>wherein each of said front and rear deck assemblies has at least one cutting blade mounted on a spindle for rotation therewith and at least one roller to support each of said deck assemblies for movement over the ground, said roller extending substantially across the entire width of said cutting path.</p>	<p>the frame of the John Deere 3365 traction unit as pictured;</p> <p>the engine that must be is part of the John Deere 3365 traction unit to allow it to operate;</p> <p>the white seat of the John Deere 3365 traction unit as pictured;</p> <p>the steering wheel of the John Deere 3365 traction unit as pictured;</p> <p>the pair of front rotary cutting deck assemblies as pictured;</p> <p>the center rear rotary cutting deck assembly;</p> <p>Obvious under 35 USC 103 to replace the two rear caster wheels with a rear roller extending substantially across the entire width of said cutting path to provide better ground following and/or striping as taught by any of the Rear Roller Teachings.</p>
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<p>11. A lawn mower as set forth in claim 10 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>The lift arms that must be present on the John Deere 3365 traction unit in order to "raise units for transportation, storage and maintenance"</p>
<p>12. A lawn mower as set forth in claim 10 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>With respect to the combination of claim 10, further obvious under 35 USC 103 to support the ground engaging wheels and rear roller between side plates and to adjust the height of cut by moving the cutting deck up and down relative to the side plates, as further taught by any of the Height of Cut Teachings.</p>

<u>311 Patent Claims</u>	<u>Risboro RTS Rotary Cutter (Rotary Cutterhead General Information brochure)</u>
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.</p>	<p>the frame of Beaver/Hayter T24 shown on page 2;</p> <p>the "engine" described at #3 on page 2;</p> <p>the seat of Beaver/Hayter T24 shown on page 2;</p> <p>the steering wheel of Beaver/Hayter T24 shown on page 2;</p> <p>both of the plural "front units" described on pages 2 - 4;</p> <p>the "centre unit" described on page 4;</p> <p>Obvious under 35 USC 103 to change the RTS rotary cutting deck assemblies from a triple spindle/blade configuration to a single spindle/blade configuration as taught by any one or all of the Single Spindle Teachings, but particularly by Torras.</p>

<p>2. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels,</p> <p>an operator's seat mounted on said frame,</p> <p>a steering system enabling the operator to steer said lawn mower,</p> <p>at least one front rotary cutting deck assembly mounted on said frame in front of said front wheels;</p> <p>at least one rear rotary cutting deck assembly mounted on said frame behind said front deck assemblies and between said front and rear wheels; and</p> <p>each of said front and rear deck assemblies including a deck defining a downwardly opening space, at least one cutting blade mounted on a spindle for rotation therewith and at least one roller supporting said deck for movement over the ground, said roller extending substantially across the entire width of said deck.</p>	<p>the frame of Beaver/Hayter T24 shown on page 2;</p> <p>the "engine" described at #3 on page 2;</p> <p>the seat of Beaver/Hayter T24 shown on page 2;</p> <p>the steering wheel of Beaver/Hayter T24 shown on page 2;</p> <p>either one of the plural "front units" described on pages 2 - 4;</p> <p>the "centre unit" described on page 4;</p> <p>the RTS rotary cutting deck assemblies shown on the first parts illustration following page 8.</p> <p>The spindle and blade limitation is met by any one of the three spindles on the RTS mower. The roller limitation is met by the rear roller of the RTS mower.</p>
<p>3. A lawn mower as set forth in claim 2 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>the "each front lift arm" described on the second paragraph, page 3, in conjunction with the fitting of the front units; and</p> <p>the "lift arm" described in the sixth paragraph, page 4, in conjunction with the fitting of the centre unit.</p>

<p>4. A lawn mower as set forth in claim 2 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>Obvious under 35 USC 103 to support the cutting decks by using side plates, front wheels and the rear roller as taught by Smith or Irgens, and by moving the deck up and down relative to the side plates as further taught by Smith or Irgens.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the hydraulic motor shown on page 2 for each cutting deck assembly.</p>
<p>7. A lawn mower as set forth in claim 2 wherein at least two front rotary cutting deck assemblies are mounted on said frame in a side-by-side relationship defining a gap between adjacent front deck assemblies.</p>	<p>both of the plural "front units" described on pages 2 – 4.</p>
<p>8. A lawn mower as set forth in claim 7 wherein at least one rear deck assembly is aligned with said gap.</p>	<p>the "centre unit" described on page 4.</p>

<p>10. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground;</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels;</p> <p>an operator's seat mounted on said frame;</p> <p>a steering system enabling the operator to steer said lawn mower;</p> <p>at least two front rotary cutting deck assemblies mounted to said frame in front of said front wheels and in a side-by-side relationship, wherein each of said front cutting deck assemblies defines a front cutting path; and</p> <p>at least one rear rotary cutting deck assembly being mounted on said frame behind said front deck assemblies, said rear rotary cutting deck assembly defining a rear cutting path extending laterally to overlap a portion of each of said front cutting paths,</p> <p>wherein each of said front and rear deck assemblies has at least one cutting blade mounted on a spindle for rotation therewith and at least one roller to support each of said deck assemblies for movement over the ground, said roller extending substantially across the entire width of said cutting path.</p>	<p>the frame of Beaver/Hayter T24 shown on page 2;</p> <p>the "engine" described at #3 on page 2;</p> <p>the seat of Beaver/Hayter T24 shown on page 2;</p> <p>the steering wheel of Beaver/Hayter T24 shown on page 2;</p> <p>both of the plural "front units" described on pages 2 - 4;</p> <p>the "centre unit" described on page 4;</p> <p>the RTS rotary cutting deck assemblies shown on the first parts illustration following page 8.</p> <p>The spindle and blade limitation is met by any one of the three spindles on the RTS mower. The roller limitation is met by the rear roller of the RTS mower.</p>
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<p>11. A lawn mower as set forth in claim 10 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>the "each front lift arm" described on the second paragraph, page 3, in conjunction with the fitting of the front units; and the "lift arm" described in the sixth paragraph, page 4, in conjunction with the fitting of the centre unit.</p>
<p>12. A lawn mower as set forth in claim 10 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>Obvious under 35 USC 103 to support the cutting decks by using side plates, front wheels and the rear roller as taught by Smith or Irgens, and by moving the deck up and down relative to the side plates as further taught by Smith or Irgens.</p>

<u>311 Patent Claims</u>	<u>Wulff Rotary Mower</u>
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.</p>	<p>the frame of the Ransomes 250 Fairway Mower ;</p> <p>the engine of the Ransomes 250 Fairway Mower;</p> <p>the seat of the Ransomes 250 Fairway Mower;</p> <p>the steering wheel of the Ransomes 250 Fairway Mower;</p> <p>Obvious under 35 USC 103 to mount five Wulff Rotary Mowers on the lift arms of the Ransomes 250 Fairway Mower. When so mounted, then any adjacent pair of the three front Wulff Rotary Mowers and the rear Wulff Rotary Mower that covers the gap between the front pair of Rotary Mowers.</p> <p>Further obvious under 35 USC 103 to change the Wulff Rotary Mower from a dual spindle/blade configuration to a single spindle/blade configuration as taught by any of the Single Spindle Teachings.</p>

<p>2. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels,</p> <p>an operator's seat mounted on said frame,</p> <p>a steering system enabling the operator to steer said lawn mower,</p> <p>at least one front rotary cutting deck assembly mounted on said frame in front of said front wheels;</p> <p>at least one rear rotary cutting deck assembly mounted on said frame behind said front deck assemblies and between said front and rear wheels; and</p> <p>each of said front and rear deck assemblies including a deck defining a downwardly opening space, at least one cutting blade mounted on a spindle for rotation therewith and at least one roller supporting said deck for movement over the ground, said roller extending substantially across the entire width of said deck.</p>	<p>the frame of the Ransomes 250 Fairway Mower;</p> <p>the engine of the Ransomes 250 Fairway Mower;</p> <p>the seat of the Ransomes 250 Fairway Mower;</p> <p>the steering wheel of the Ransomes 250 Fairway Mower;</p> <p>Obvious under 35 USC 103 to mount five Wulff Rotary Mowers on the lift arms of the Ransomes 250 Fairway Mower. When so mounted, any one of the three front Wulff Rotary Mowers and any one of the pair of rear Wulff Rotary Mowers.</p> <p>The spindle and blade limitation is met by any one of the dual spindles on the Wulff Rotary Mower. The roller limitation is met by the rear roller of the Wulff Rotary Mower.</p>
<p>3. A lawn mower as set forth in claim 2 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>the lift arms of the Ransomes 250 Fairway Mower.</p>

<p>4. A lawn mower as set forth in claim 2 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>Obvious under 35 USC 103 to support the cutting decks by using side plates, front wheels and the rear roller as taught by Smith or Irgens, and by moving the deck up and down relative to the side plates as further taught by Smith or Irgens.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the hydraulic motor shown on each Wulff Rotary Mower.</p>
<p>7. A lawn mower as set forth in claim 2 wherein at least two front rotary cutting deck assemblies are mounted on said frame in a side-by-side relationship defining a gap between adjacent front deck assemblies.</p>	<p>any adjacent pair of the three front Wulff Rotary Mowers.</p>
<p>8. A lawn mower as set forth in claim 7 wherein at least one rear deck assembly is aligned with said gap.</p>	<p>the rear Wulff Rotary Mower that covers the gap between the front pair of Rotary Mowers.</p>

<p>10. A gang-type rotary lawn mower comprising:</p> <p>a frame supported by front and rear wheels for movement over the ground;</p> <p>a power source which is mounted on said frame and which drives at least two of said wheels;</p> <p>an operator's seat mounted on said frame;</p> <p>a steering system enabling the operator to steer said lawn mower;</p> <p>at least two front rotary cutting deck assemblies mounted to said frame in front of said front wheels and in a side-by-side relationship, wherein each of said front cutting deck assemblies defines a front cutting path; and</p> <p>at least one rear rotary cutting deck assembly being mounted on said frame behind said front deck assemblies, said rear rotary cutting deck assembly defining a rear cutting path extending laterally to overlap a portion of each of said front cutting paths,</p> <p>wherein each of said front and rear deck assemblies has at least one cutting blade mounted on a spindle for rotation therewith and at least one roller to support each of said deck assemblies for movement over the ground, said roller extending substantially across the entire width of said cutting path.</p>	<p>the frame of the Ransomes 250 Fairway Mower;</p> <p>the engine of the Ransomes 250 Fairway Mower;</p> <p>the seat of the Ransomes 250 Fairway Mower;</p> <p>the steering wheel of the Ransomes 250 Fairway Mower;</p> <p>Obvious under 35 USC 103 to mount five Wulff Rotary Mowers on the lift arms of the Ransomes 250 Fairway Mower. When so mounted, then any adjacent pair of the three front Wulff Rotary Mowers and the rear Wulff Rotary Mower that covers the gap between the front pair of Rotary Mowers</p> <p>The spindle and blade limitation is met by any one of the dual spindles on the Wulff Rotary Mower. The roller limitation is met by the rear roller of the Wulff Rotary Mower.</p>
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<p>11. A lawn mower as set forth in claim 10 wherein each deck assembly is connected to said frame by a respective lifting arm operable to lift the associated deck assembly relative to said frame, such that each of said deck assemblies is connected by its own lifting arm to said frame.</p>	<p>the lift arms of the Ransomes 250 Fairway Mower.</p>
<p>12. A lawn mower as set forth in claim 10 wherein each of said front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of said side plates for movement over the ground, and a second front wheel supporting the other of said side plates for movement over the ground, wherein said roller extends between said side plates and supports said side plates for movement over the ground, wherein the associated deck is located between said side plates and in front of said roller and is mounted on said side plates such that the height of said deck relative to the ground is adjustable by changing the position of said deck relative to said side plates.</p>	<p>Obvious under 35 USC 103 to support the cutting decks by using side plates, front wheels and the rear roller as taught by Smith or Irgens, and by moving the deck up and down relative to the side plates as further taught by Smith or Irgens.</p>